

=&gt; d que

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L1      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("N-VINYLPYRROLIDONE
        HOMOPOLYMER"/CN OR "N-VINYLPYRROLIDONE POLYMER"/CN)
L2      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  1-VINYL-2-PIPERIDINONE/CN
L3      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  N-VINYL-N-METHYLACETAMIDE/CN

L5      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  3195-79-7
L11     1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "PROPANAMIDE, N-ETHENYL-N,2-D
        IMETHYL-"/CN
L26     5 SEA FILE=REGISTRY ABB=ON  PLU=ON  L1 OR L2 OR L3 OR L5 OR L11
L27     596 SEA FILE=REGISTRY ABB=ON  PLU=ON  (13044-12-7/CRN OR 3195-78-6/
        CRN OR 3195-79-7/CRN OR 4370-23-4/CRN OR 9003-39-8/CRN)
L28     601 SEA FILE=REGISTRY ABB=ON  PLU=ON  L26 OR L27
L29     1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "TRIIODIDE ION"/CN
L30     2714 SEA FILE=REGISTRY ABB=ON  PLU=ON  14900-04-0/CRN
L31     2715 SEA FILE=REGISTRY ABB=ON  PLU=ON  L29 OR L30
L33     17 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 AND L31
L34     222357 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ANTIMICROBIAL AGENTS+PFT,NT/CT

L35     5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L33 AND L34
L36     17 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L33 OR L35

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=&gt; d l36 ibib ab hitind hitstr 1-17

L36 ANSWER 1 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:277839 HCAPLUS

DOCUMENT NUMBER: 141:35842

TITLE: Investigation of the iodine-poly(vinylpyrrolidone) interaction employed in the determination of biocidal iodine by colorimetric solid-phase extraction

AUTHOR(S): Gazda, Daniel B.; Lipert, Robert J.; Fritz, James S.; Porter, Marc D.

CORPORATE SOURCE: Microanalytical Instrumentation Center, Ames Laboratory US-DOE, and Department of Chemistry, Iowa State University, Ames, IA, 50011, USA

SOURCE: Analytica Chimica Acta (2004), 510(2), 241-247

CODEN: ACACAM; ISSN: 0003-2670

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Colorimetric solid-phase extraction (C-SPE) has been previously explored as a means to monitor the iodine-based disinfectant used in the water systems on board the space shuttle. This same disinfectant is baselined for eventual deployment in the US water recovery system planned for node 3 of the International Space Station (ISS). With C-SPE, the I<sub>2</sub> concentration is determined

from the diffuse reflectance spectrum (DRS) of the yellow iodine-poly(vinylpyrrolidone) (PVP) complex using the Kubelka-Munk function. However, the solution chemical of iodine is very complex and results in a variety of inorg. species (e.g., I<sup>-</sup>, I<sub>2</sub>, I<sub>3</sub><sup>-</sup>, HIO) that have very different biocidal capabilities. Thus, the nature of the interaction of iodine with PVP, and, more specifically, the identity of the iodine species involved in the interaction, requires more elucidation. This paper reports the findings from a series of detailed expts. conducted to elicit a more complete understanding of the iodine-PVP system employed in C-SPE. The results indicate that I<sub>2</sub>, one of the two dominant biocidal forms of iodine, is the species responsible for the anal. signal in our

C-SPE platform. These findings lay the groundwork for the planned development of a multiplexed iodine determination and speciation platform for in-flight anal. of spacecraft water samples.

CC 9-13 (Biochemical Methods)  
 Section cross-reference(s): 61, 79

IT 7553-56-2, Iodine, analysis **9003-39-8D**, 2-Pyrrolidinone, 1-ethenyl-, homopolymer, iodine complex 14332-21-9, Hypoiodous acid **14900-04-0**, Triiodide 20461-54-5, Iodide, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (iodine-poly(vinylpyrrolidone) interaction used in the determination of biocidal iodine in drinking water for space vehicles by colorimetric solid-phase extraction)

IT **9003-39-8D**, 2-Pyrrolidinone, 1-ethenyl-, homopolymer, iodine complex **14900-04-0**, Triiodide  
 RL: ANT (Analyte); ANST (Analytical study)  
 (iodine-poly(vinylpyrrolidone) interaction used in the determination of biocidal iodine in drinking water for space vehicles by colorimetric solid-phase extraction)

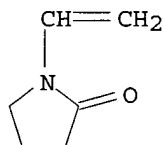
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



RN 14900-04-0 HCAPLUS

CN Iodide (I31-) (8CI, 9CI) (CA INDEX NAME)

I-I<sup>-</sup>-I

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:339891 HCAPLUS

DOCUMENT NUMBER: 136:327358

TITLE: Quaternary ammonium base triiodides and their water-soluble antimicrobial composition for oral or parenteral use

INVENTOR(S): Livitskii, V. I.; Vilkov, G. A.; Stradomskii, B. V.; Martynenko, L. D.; Pyshchev, A. I.; Pavlovskii, S. V.

PATENT ASSIGNEE(S): Russia

SOURCE: Russ., No pp. given

CODEN: RUXXE7

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2154053	C2	20000810	RU 1998-105833	19980407

PRIORITY APPLN. INFO.: RU 1998-105833 19980407

OTHER SOURCE(S): MARPAT 136:327358

AB Invention provides novel quaternary ammonium base triiodides with formulas I-IV, in which R1, R2, R3, R4, R8, R9 are hydrogen or C1-C6- alkyl; R7 is (n12 = 2-4), (n14 = 0-4 and n15 = 0-4), (n16 = 0-4 and n17 = 0-4), (n18 = 0-4, n19 = 0-4, R20 is hydrogen or C1-C6-alkyl), (n20 = 0-4, n21 = 0-4 = 0-4, R21, R22 are hydrogen or C1-C6-alkyl, and X is I, I3); R10, R11, R12 are hydrogen, C1-C6-alkyl; n1, n2 are 3 or 4; and X is I, I3. Above defined compds. are useful for preparing water-soluble antimicrobial composition, in which ammonium triiodides constitute 1 to 40%, the rest being a surfactant. Compns. are administered orally or parenterally.

IC ICM C07C211-63  
ICS C07C209-74; C07D295-037; C07D487-18; C07D487-04; C07D213-20; C07D215-10; A61K031-14; A61P031-00

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
Section cross-reference(s): 23, 63

IT **Antimicrobial agents**  
Candida albicans  
Clostridium difficile  
Escherichia coli  
Staphylococcus aureus  
(preparation of quaternary ammonium base triiodides and their water-soluble antimicrobial composition for oral or parenteral use)

IT 4337-68-2P, Tetramethylammonium triiodide 26805-90-3P  
117015-89-1P 412328-48-4P, N-Ethyl-N-methylmorpholinium triiodide 412328-50-8P, N,N'-Dimethyl-N,N'-dihexylpiperazinium triiodide 412328-51-9P 412328-53-1P  
412328-54-2P 412328-55-3P 412328-57-5P  
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of quaternary ammonium base triiodides and their water-soluble antimicrobial composition for oral or parenteral use)

IT 9003-39-8, Polyvinylpyrrolidone  
RL: NUU (Other use, unclassified); USES (Uses)  
(preparation of quaternary ammonium base triiodides and their water-soluble antimicrobial composition for oral or parenteral use)

IT 4337-68-2P, Tetramethylammonium triiodide 26805-90-3P  
117015-89-1P 412328-48-4P, N-Ethyl-N-methylmorpholinium triiodide 412328-50-8P, N,N'-Dimethyl-N,N'-dihexylpiperazinium triiodide 412328-51-9P 412328-53-1P  
412328-54-2P 412328-55-3P 412328-57-5P  
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of quaternary ammonium base triiodides and their water-soluble antimicrobial composition for oral or parenteral use)

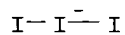
RN 4337-68-2 HCAPLUS

CN Methanaminium, N,N,N-trimethyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 14900-04-0

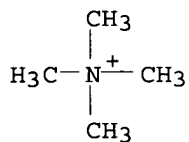
CMF I3



CM 2

CRN 51-92-3

CMF C4 H12 N



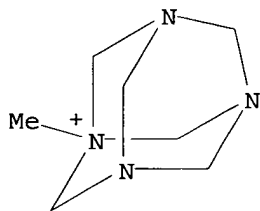
RN 26805-90-3 HCAPLUS

CN 3,5,7-Triaza-1-azoniatricyclo[3.3.1.1<sup>3,7</sup>]decane, 1-methyl-, (triiodide)  
(9CI) (CA INDEX NAME)

CM 1

CRN 48113-49-1

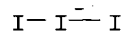
CMF C7 H15 N4



CM 2

CRN 14900-04-0

CMF I3



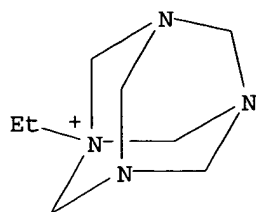
RN 117015-89-1 HCAPLUS

CN 3,5,7-Triaza-1-azoniatricyclo[3.3.1.1<sup>3,7</sup>]decane, 1-ethyl-, (triiodide)  
(9CI) (CA INDEX NAME)

CM 1

CRN 60470-51-1

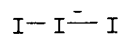
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CM 2

CRN 14900-04-0

CMF I3



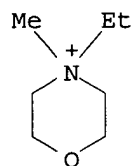
RN 412328-48-4 HCAPLUS

CN Morpholinium, 4-ethyl-4-methyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 52132-55-5

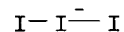
CMF C7 H16 N O



CM 2

CRN 14900-04-0

CMF I3



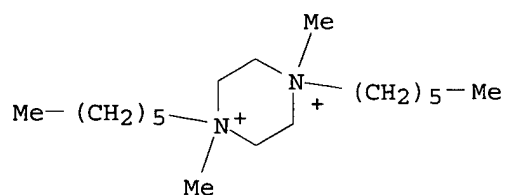
RN 412328-50-8 HCAPLUS

CN Piperazinium, 1,4-dihexyl-1,4-dimethyl-, bis(triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 412328-49-5

CMF C18 H40 N2



CM 2

CRN 14900-04-0

CMF I3

I- I<sup>-</sup> I

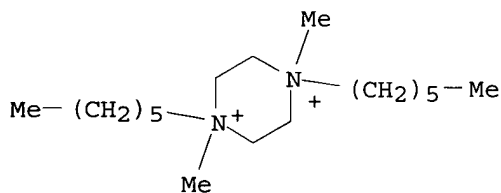
RN 412328-51-9 HCAPLUS

CN Piperazinium, 1,4-dihexyl-1,4-dimethyl-, iodide (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 412328-49-5

CMF C18 H40 N2



CM 2

CRN 14900-04-0

CMF I3

I- I<sup>-</sup> I

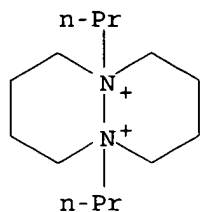
RN 412328-53-1 HCAPLUS

CN Pyridazino[1,2-a]pyridazinium, octahydro-5,10-dipropyl-, iodide (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 412328-52-0

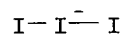
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CM 2

CRN 14900-04-0

CMF I3



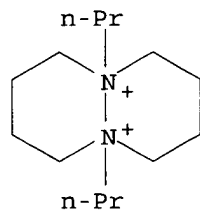
RN 412328-54-2 HCAPLUS

CN Pyridazino[1,2-a]pyridazinium, octahydro-5,10-dipropyl-, bis(triiodide)  
(9CI) (CA INDEX NAME)

CM 1

CRN 412328-52-0

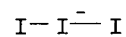
CMF C14 H30 N2



CM 2

CRN 14900-04-0

CMF I3

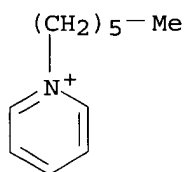


RN 412328-55-3 HCAPLUS

CN Pyridinium, 1-hexyl-, (triiodide) (9CI) (CA INDEX NAME)

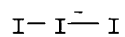
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CRN 46122-12-7  
CMF C11 H18 N



CM 2

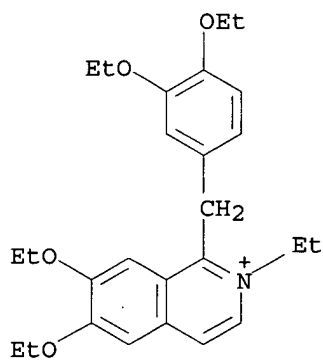
CRN 14900-04-0  
CMF I3



RN 412328-57-5 HCAPLUS  
CN Isoquinolinium, 1-[(3,4-diethoxyphenyl)methyl]-6,7-diethoxy-2-ethyl-,  
(triiodide) (9CI) (CA INDEX NAME)

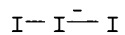
CM 1

CRN 412328-56-4  
CMF C26 H34 N O4



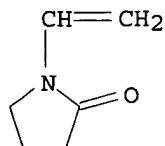
CM 2

CRN 14900-04-0  
CMF I3





IT 9003-39-8, Polyvinylpyrrolidone  
RL: NUU (Other use, unclassified); USES (Uses)  
(preparation of quaternary ammonium base triiodides and their water-soluble  
antimicrobial composition for oral or parenteral use)  
RN 9003-39-8 HCAPLUS  
CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)  
  
CM 1  
  
CRN 88-12-0  
CMF C6 H9 N O



L36 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2002:198055 HCAPLUS  
DOCUMENT NUMBER: 136:241695  
TITLE: Preparation, pharmaceutical compositions, and  
pharmacological activity of iodinated quaternary  
ammonium halogenides  
INVENTOR(S): Pyshchev, A. I.; Konstantinchenko, A. A.; Zusman, A.  
I.  
PATENT ASSIGNEE(S): Russia  
SOURCE: Russ., No pp. given  
CODEN: RUXXE7  
DOCUMENT TYPE: Patent  
LANGUAGE: Russian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2149866	C1	20000527	RU 1998-106094	19980326

PRIORITY APPLN. INFO.: RU 1998-106094 19980326  
OTHER SOURCE(S): CASREACT 136:241695; MARPAT 136:241695  
AB Methods are disclosed for the synthesis of the iodinated halogenides of  
quaternary ammonium salts (Markush included). Compds. showed different  
pharmacol. activity such as tuberculostatic, antiulcer, antiviral,  
anthelmintic, at low levels of toxicity. The invention also describes  
iodinated quaternary ammonium halogenide-containing pharmaceutical compns.  
Synthesis of compds. is included.  
IC ICM C07C211-63  
ICS C07C209-74; C07D295-037; C07D487-04; C07D235-04; A61K031-14;  
A61P033-10; A61P031-16; A61P031-22; A61P043-00  
CC 1-12 (Pharmacology)  
Section cross-reference(s): 63  
IT Anthelmintics  
Antiulcer agents  
Antiviral agents  
Drug design  
Emulsifying agents  
Human herpesvirus

Hymenolepis  
 Mixtures  
 Pneumonia  
 Polar solvents  
 Solutions  
 Solvents  
 Surfactants  
 Tuberculostatics

(iodinated quaternary ammonium halogenide preparation, pharmaceutical compns., and pharmacol. activity)

IT 3419-99-6P 143183-36-2P 208924-23-6P  
 208924-34-9P 208924-35-0P 208924-36-1P  
 217812-49-2P 375814-55-4P 375814-57-6P 391233-01-5P  
 391233-02-6P 391233-25-3P 391233-31-1P  
 391247-91-9P 404824-34-6P 404824-36-8P 404824-38-0P  
 404824-39-1P 404824-41-5P 404824-43-7P 404824-44-8P  
 404824-45-9P 404824-46-0P 404824-47-1P  
 404824-48-2P 404824-50-6P 404824-51-7P 404824-52-8P  
 404824-53-9P 404824-54-0P

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(iodinated quaternary ammonium halogenide preparation, pharmaceutical compns., and pharmacol. activity)

IT 404824-55-1P 404824-56-2P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (iodinated quaternary ammonium halogenide preparation, pharmaceutical compns., and pharmacol. activity)

IT 50-99-7, Glucose, biological studies 64-17-5, Ethanol, biological studies 67-68-5, Dimethylsulfoxide, biological studies 110-15-6, Amber acid, biological studies 111-87-5, Octyl alcohol, biological studies 141-43-5, Ethanolamine, biological studies 9003-39-8  
 9004-42-6, Carboxyethylcellulose 9004-53-9, Dextrin 25322-68-3, Polyethyleneglycol 216973-84-1, Lemon acid

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(iodinated quaternary ammonium halogenide preparation, pharmaceutical compns., and pharmacol. activity)

IT 143183-36-2P 208924-23-6P 208924-34-9P  
 208924-35-0P 208924-36-1P 217812-49-2P  
 391233-02-6P 391233-25-3P 391233-31-1P  
 404824-34-6P 404824-43-7P 404824-44-8P  
 404824-45-9P 404824-46-0P 404824-47-1P  
 404824-50-6P 404824-54-0P

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(iodinated quaternary ammonium halogenide preparation, pharmaceutical compns., and pharmacol. activity)

RN 143183-36-2 HCAPLUS

CN Pyridinium, 1-hexadecyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 14900-04-0

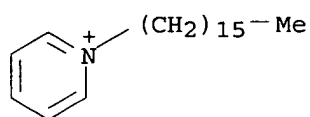
CMF I3

I-I-I

CM 2

CRN 7773-52-6

CMF C21 H38 N



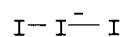
RN 208924-23-6 HCAPLUS

CN 1H-Benzimidazolium, 1,3-dimethyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 14900-04-0

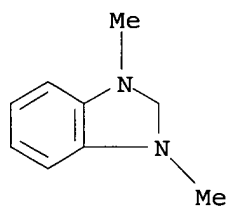
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CM 2

CRN 769-15-3

CMF C9 H11 N2



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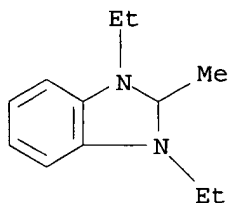
RN 208924-34-9 HCAPLUS

CN 1H-Benzimidazolium, 1,3-diethyl-2-methyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 42846-21-9

CMF C12 H17 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 14900-04-0

CMF I3

I-I<sup>-</sup>-I

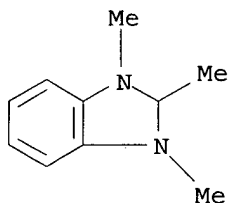
RN 208924-35-0 HCAPLUS

CN 1H-Benzimidazolium, 1,2,3-trimethyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 50571-73-8

CMF C10 H13 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 14900-04-0

CMF I3

I-I<sup>-</sup>-I

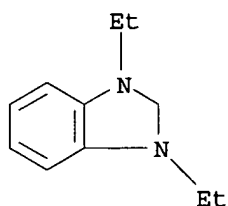
RN 208924-36-1 HCAPLUS

CN 1H-Benzimidazolium, 1,3-diethyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 87963-20-0

CMF C11 H15 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 14900-04-0

CMF I3

I- I<sup>-</sup> I

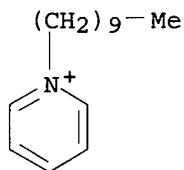
RN 217812-49-2 HCAPLUS

CN Pyridinium, 1-decyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 46746-05-8

CMF C15 H26 N



CM 2

CRN 14900-04-0

CMF I3

I- I<sup>-</sup> I

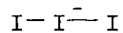
RN 391233-02-6 HCAPLUS

CN Pyridinium, 3-(aminocarbonyl)-1-propyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 14900-04-0

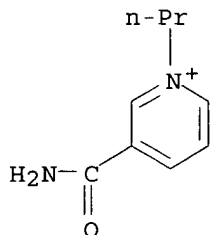
CMF I3



CM 2

CRN 13309-33-6

CMF C9 H13 N2 O



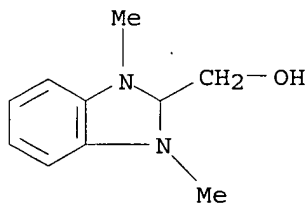
RN 391233-25-3 HCAPLUS

CN 1H-Benzimidazolium, 2-(hydroxymethyl)-1,3-dimethyl-, (triiodide) (9CI)  
(CA INDEX NAME)

CM 1

CRN 391233-24-2

CMF C10 H13 N2 O

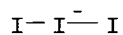


\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 14900-04-0

CMF I3

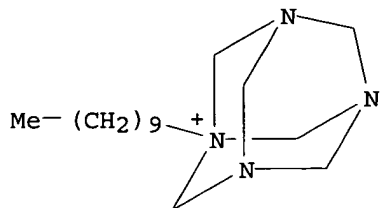


RN 391233-31-1 HCAPLUS

CN 3,5,7-Triaza-1-azoniatricyclo[3.3.1.1.3,7]decane, 1-decyl-, (triiodide)  
(9CI) (CA INDEX NAME)

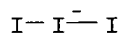
CM 1

CRN 391233-30-0  
CMF C16 H33 N4



CM 2

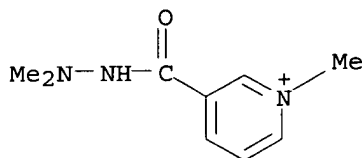
CRN 14900-04-0  
CMF I3



RN 404824-34-6 HCAPLUS  
CN Pyridinium, 3-[(2,2-dimethylhydrazino)carbonyl]-1-methyl-, (triiodide)  
(9CI) (CA INDEX NAME)

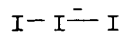
CM 1

CRN 404824-33-5  
CMF C9 H14 N3 O



CM 2

CRN 14900-04-0  
CMF I3

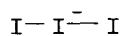


RN 404824-43-7 HCAPLUS  
CN Benzenaminium, 3-hydroxy-N,N,N-trimethyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 14900-04-0

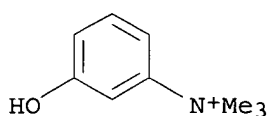
CMF I3



CM 2

CRN 3483-84-9

CMF C9 H14 N O



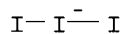
RN 404824-44-8 HCAPLUS

CN Ethanaminium, N,N,N-trimethyl-2-(1-oxobutoxy)-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 14900-04-0

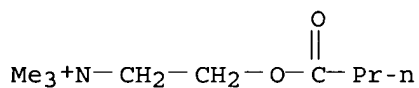
CMF I3



CM 2

CRN 3922-86-9

CMF C9 H20 N O2



RN 404824-45-9 HCAPLUS

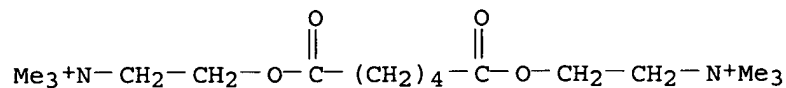
CN Ethanaminium, 2,2'-[(1,6-dioxo-1,6-hexanediyl)bis(oxy)]bis[N,N,N-trimethyl-, iodide (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 97654-02-9

CMF C16 H34 N2 O4





CM 2

CRN 14900-04-0

CMF I3

I- I<sup>-</sup> I

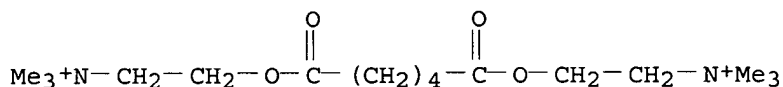
RN 404824-46-0 HCAPLUS

CN Ethanaminium, 2,2'-[(1,6-dioxo-1,6-hexanediyl)bis(oxy)]bis[N,N,N-trimethyl-, bis(triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 97654-02-9

CMF C16 H34 N2 O4



CM 2

CRN 14900-04-0

CMF I3

I- I<sup>-</sup> I

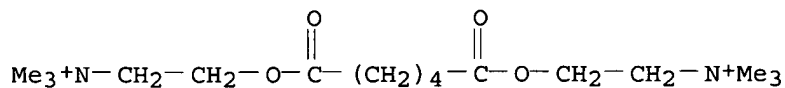
RN 404824-47-1 HCAPLUS

CN Ethanaminium, 2,2'-[(1,6-dioxo-1,6-hexanediyl)bis(oxy)]bis[N,N,N-trimethyl-, (triiodide) (pentaiodide) (9CI) (CA INDEX NAME)

CM 1

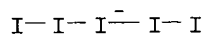
CRN 97654-02-9

CMF C16 H34 N2 O4



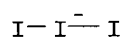
CM 2

CRN 22318-17-8  
CMF I5



CM 3

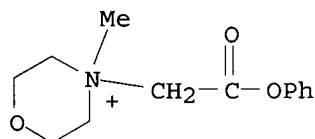
CRN 14900-04-0  
CMF I3



RN 404824-50-6 HCAPLUS  
CN Morpholinium, 4-methyl-4-(2-oxo-2-phenoxyethyl)-, (triiodide) (9CI) (CA  
INDEX NAME)

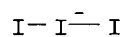
CM 1

CRN 404824-49-3  
CMF C13 H18 N O3



CM 2

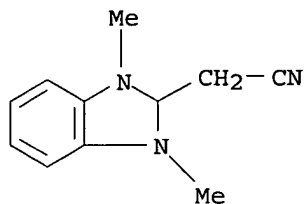
CRN 14900-04-0  
CMF I3



RN 404824-54-0 HCAPLUS  
CN 1H-Benzimidazolium, 2-(cyanomethyl)-1,3-dimethyl-, (triiodide) (9CI) (CA  
INDEX NAME)

CM 1

CRN 56280-32-1  
CMF C11 H12 N3



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 14900-04-0

CMF I3

I-I<sup>-</sup>I

IT **404824-56-2P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(iodinated quaternary ammonium halogenide preparation, pharmaceutical  
compns., and pharmacol. activity)

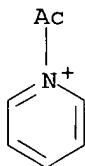
RN 404824-56-2 HCAPLUS

CN Pyridinium, 1-acetyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 29788-34-9

CMF C7 H8 N O



CM 2

CRN 14900-04-0

CMF I3

I-I<sup>-</sup>I

IT **9003-39-8**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(iodinated quaternary ammonium halogenide preparation, pharmaceutical  
compns., and pharmacol. activity)

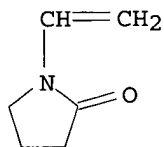
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



L36 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:489243 HCAPLUS

DOCUMENT NUMBER: 135:82013

TITLE: Non-staining topical iodine composition

INVENTOR(S): Kessler, Jack

PATENT ASSIGNEE(S): Symbolion Corp., USA

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001047534	A1	20010705	WO 1999-US31056	19991228
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: WO 1999-US31056 19991228

AB Non-staining topical iodine disinfecting compns. having the ability to inactivate pathogens associated with skin infections or diseases based upon the presence of mol. iodine in a concentration above at least 15 ppm is disclosed. Any other iodine species selected from the group consisting of complexed iodine and triiodide may be present with the total of such other iodine species limited to a concentration of less than about 700 ppm so that

any

visible stain resulting from the application of this composition on the skin will dissipate without leaving any visible skin coloration. A gel containing sodium iodate 0.20, sodium iodide 0.06, Carbopol-980 1.00, and excipients q.s. 100% was prepared. The concentration of mol. iodine in the gel after 21

days

was 198 ppm.

IC ICM A61K033-18

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

IT 50-70-4, Sorbitol, biological studies 56-81-5, Glycerin, biological studies 57-55-6, Propylene glycol, biological studies 65-85-0, benzoic

acid, biological studies 77-92-9, citric acid, biological studies 90-64-2, mandelic acid 97-59-6, Allantoin 107-97-1D, sarcosinic acid, alkyl derivs. 110-44-1, sorbic acid 5138-18-1D, Sulfosuccinic acid, esters 7722-84-1, Hydrogen peroxide, biological studies 9002-89-5, Polyvinyl alcohol 9003-39-8, polyvinyl pyrrolidone 9003-99-0, Peroxidase 9004-34-6, Cellulose, biological studies 9005-32-7, Alginic acid 14900-04-0, Triiodide 25322-68-3, Polyethylene glycol 25719-55-5, Polyvinyl methacrylate 52673-60-6, glucam p10 53026-67-8, glucam e10 68239-42-9, glucam e20 86893-19-8, glucamate doe 120 106392-12-5, Propylene oxide ethylene oxide block copolymer 138757-67-2, Carbopol-980

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(non-staining topical iodine composition)

IT 9003-39-8, polyvinyl pyrrolidone 14900-04-0, Triiodide

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(non-staining topical iodine composition)

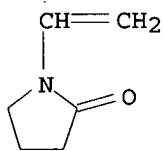
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



RN 14900-04-0 HCAPLUS

CN Iodide (I31-) (8CI, 9CI) (CA INDEX NAME)

I-I-I

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:73876 HCAPLUS

DOCUMENT NUMBER: 128:162402

TITLE: Optimization of iodine determination according to Schoeniger. Analytical chemistry with 1,3-dibromo-5,5-dimethylhydantoin (DBH) part 1, oxygen flask combustion part 7

AUTHOR(S): Hilp, Manfred

CORPORATE SOURCE: Institut Pharmazeutische Chemie, Philipps-Universitaet, Marburg, D-35032, Germany

SOURCE: Fresenius' Journal of Analytical Chemistry (1998), 360(2), 184-191

CODEN: FJACES; ISSN: 0937-0633

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The method of I2 determination in organic compds. according to Schoeniger was improved by using an alkaline absorption solution of 1,3-dibromo-5,5-dimethylhydantoin (DBH). In contrast to elemental Br2 DBH is a stable and easy to handle crystalline compound. For the removal of the excess of DBH 5-sulfosalicylic acid (C7H6O6S + 2H2O [5965-83-3]) is more suitable than formic acid [64-18-6]. Assays for the determination of 2-iodobenzoic acid in

the range from 1 to 25 mg iodine are described. 32 Organic iodine compds., mostly x-ray contrast media, could be analyzed with a percentage relative standard deviation of about 0.2%.

CC 80-6 (Organic Analytical Chemistry)

Section cross-reference(s): 64

IT 51-48-9, Levothyroxine, analysis 54-42-2, Idoxuridine 55-03-8, Levothyroxine sodium 75-47-8, Iodoform 88-67-5, 2-Iodobenzoic acid 96-83-3, Iopanoic acid 130-26-7, Clioquinol 540-37-4, 4-Iodoaniline 547-91-1 606-17-7, Adipiodone 636-98-6, 1-Iodo-4-nitrobenzene 1041-01-6, 3,5-Diiodothyronine 1151-11-7, Iopodate calcium 1221-56-3, Iopodate sodium 1774-47-6, Trimethylsulfoxonium iodide 2276-90-6, Iothalamic acid 2618-25-9, Ioglycamic acid 4338-95-8 6160-08-3, Sozoiodolic acid sodium salt dihydrate 6893-02-3, Liothyronine 7553-56-2, Iodine, analysis 16034-77-8, Iocetamic acid 19774-82-4, Amiodarone hydrochloride **25655-41-8**, Povidone, iodinated 35600-34-1, S-Methylisothiosemicarbazide hydroiodide 38070-41-6, Tiodonium chloride 49755-67-1, Ioglicic acid 50978-11-5, Amidotrizoic acid dihydrate 51022-74-3, Iotroxic acid 59017-64-0, Ioxaglic acid 66108-95-0, Iohexol 79770-24-4, Iotrolan **201930-13-4**  
RL: ANT (Analyte); ANST (Analytical study)

(iodine determination in organic compds. using dibromodimethylhydantoin as bromination agent)

IT **25655-41-8**, Povidone, iodinated **201930-13-4**

RL: ANT (Analyte); ANST (Analytical study)

(iodine determination in organic compds. using dibromodimethylhydantoin as bromination agent)

RN 25655-41-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine (9CI) (CA INDEX NAME)

CM 1

CRN 7553-56-2

CMF I2

I-I

CM 2

CRN 9003-39-8

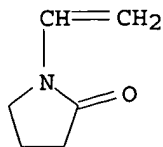
CMF (C6 H9 N O)x

CCI PMS

CM 3

CRN 88-12-0

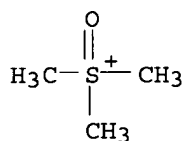
CMF C6 H9 N O



RN 201930-13-4 HCAPLUS  
 CN Sulfoxonium, trimethyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 47987-92-8  
 CMF C3 H9 O S



CM 2

CRN 14900-04-0  
 CMF I3

I-I-I

L36 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1996:501710 HCAPLUS  
 DOCUMENT NUMBER: 125:135438  
 TITLE: Iodine biocidal material  
 INVENTOR(S): Christie, Gregor Bruce Yeo; Christov, Victor  
 PATENT ASSIGNEE(S): Commonwealth Scientific and Industrial Research  
 Organization, Australia  
 SOURCE: PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9619921	A1	19960704	WO 1995-AU872	19951222
W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				

AU 9643233 A1 19960719 AU 1996-43233 19951222  
 PRIORITY APPLN. INFO.: AU 1994-287 19941223  
 AU 1995-3581 19950615  
 WO 1995-AU872 19951222

AB A biocidally active composition including iodine or a compound or complex thereof and a solubilizing agent and/or carrier. Suitable iodine compds. are K iodide, K iodate, bisglycine hydroiodide, 2,3,4,5-tetraiodopyrrole, dithymol diiodide, bis(p-chlorophenyl)iodonium chloride, etc. Suitable solubilizing agent and/or carriers are poly(vinyl alc.), starch, amylose, amylopectin, polyethylene oxide, PVP, vinylpyrrolidone copolymers, etc.

IC ICM A01N059-12  
 ICS A01N031-08

CC 5-2 (Agrochemical Bioregulators)  
 Section cross-reference(s): 63

IT **Bactericides, Disinfectants, and Antiseptics**  
**Fungicides and Fungistats**  
**Virucides and Virustats**  
 (iodine biocidal material)

IT 87-58-1, 2,3,4,5-Tetraiodopyrrole 88-12-0D, copolymers, complexes with iodine 7490-95-1, Bisglycine hydroiodide 7553-56-2D, Iodine, complexes 7681-11-0, Potassium iodide, biological studies 7758-05-6, Potassium iodate 9003-39-8D, PVP, complex with iodine 9005-25-8D, Starch, complex with iodine 15304-14-0, Aluminum hexaurea sulfate triiodide 20018-09-1 20018-12-6 34220-01-4, Bis(p-chlorophenyl)iodonium chloride 35860-86-7 179911-80-9 179911-81-0, Aluminum hexaurea dinitrite triiodide  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (iodine biocidal material)

IT 9002-89-5, Poly(vinyl alcohol) 9003-39-8, PVP 9004-34-6, Cellulose, uses 9005-25-8, Starch, uses 9005-82-7, Amylose 9037-22-3, Amylopectin 25067-33-8 25322-68-3 25639-13-8 26008-54-8, Vinylpyrrolidone-vinyl alcohol polymer 30581-59-0 31628-40-7 83560-42-3 149939-00-4, Vinylpyrrolidone-butylene polymer 179911-82-1  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (solubilizing agent and/or carrier; iodine biocidal material)

IT 9003-39-8D, PVP, complex with iodine 15304-14-0, Aluminum hexaurea sulfate triiodide 179911-81-0, Aluminum hexaurea dinitrite triiodide  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (iodine biocidal material)

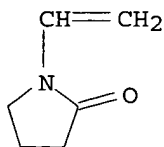
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



RN 15304-14-0 HCAPLUS



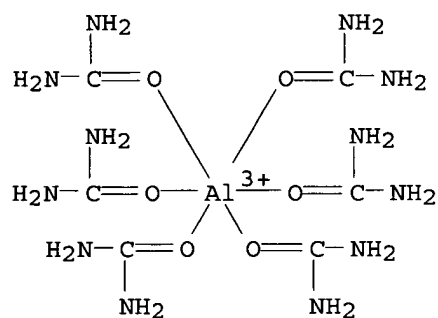
CN Aluminum(3+), hexakis(urea-O)-, (OC-6-11)-, sulfate (triiodide) (1:1:1)  
(9CI) (CA INDEX NAME)

CM 1

CRN 45282-26-6

CMF C6 H24 Al N12 O6

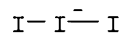
CCI CCS



CM 2

CRN 14900-04-0

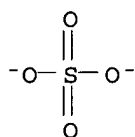
CMF I3



CM 3

CRN 14808-79-8

CMF O4 S



RN 179911-81-0 HCAPLUS

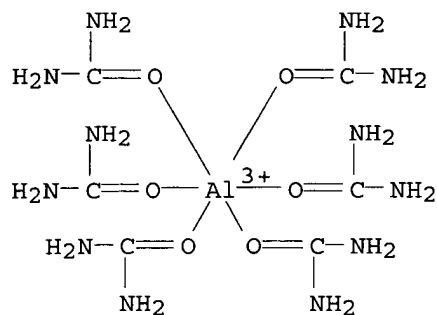
CN Aluminum(3+), hexakis(urea-O)-, (OC-6-11)-, dinitrite (triiodide) (9CI)  
(CA INDEX NAME)

CM 1

CRN 45282-26-6

CMF C6 H24 Al N12 O6

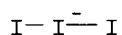
CCI CCS



CM 2

CRN 14900-04-0

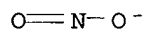
CMF I3



CM 3

CRN 14797-65-0

CMF N O2



IT 9003-39-8, PVP

RL: MOA (Modifier or additive use); USES (Uses)  
 (solubilizing agent and/or carrier; iodine biocidal material)

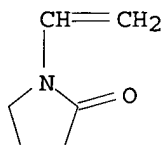
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



L36 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

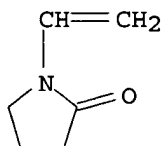
ACCESSION NUMBER: 1993:577111 HCAPLUS

DOCUMENT NUMBER: 119:177111

TITLE: Graphite-base solid-state polymeric membrane  
 ion-selective electrodes

INVENTOR(S): Shu, Frank R.  
 PATENT ASSIGNEE(S): Beckman Instruments, Inc., USA  
 SOURCE: Eur. Pat. Appl., 12 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 551769	A1	19930721	EP 1992-311834	19921229
EP 551769	B1	19970716		
R: AT, DE, ES, FR, GB, IT				
US 5286365	A	19940215	US 1992-821158	19920115
CA 2085322	AA	19930716	CA 1992-2085322	19921214
CA 2085322	C	20000425		
AT 155580	E	19970815	AT 1992-311834	19921229
ES 2104861	T3	19971016	ES 1992-311834	19921229
PRIORITY APPLN. INFO.: US 1992-821158 A 19920115				
AB An improved solid-state ion-selective electrode (ISE) has greater uniformity of asym. potential and high sensitivity and selectivity for the cation of interest. The electrode comprises (1) a porous element of graphite; (2) an electrochem. reference in substantially dry form on at least a portion of the element, the reference comprising (a) an oxidant and (b) a reductant that is the conjugate of the oxidant, the oxidant and reductant being present in about equimolar quantities; and (3) a polymeric membrane comprising an ion-selective ionophore in electrochem. contact with the electrochem. reference. The electrode can be prepared to be selective for a number of cations. Methods of preparation of the electrodes are also described. An ISE for lithium ion and an ISE for ammonium ion are described.				
IC	ICM G01N027-30			
CC	9-1 (Biochemical Methods)			
Section cross-reference(s): 79				
IT	102-54-5, Ferrocene 7553-56-2D, Iodine, polyvinylpyrrolidone complexes 9003-39-8D, Polyvinylpyrrolidone, iodine complexes 12125-80-3D, Ferricinium, derivs. 13408-62-3, Ferricyanide 13408-63-4, Ferrocyanide 14900-04-0, Triiodide 20461-54-5, Iodide, uses			
RL: ANST (Analytical study)				
(electrochem. reference containing, in ion-selective solid-state electrode)				
IT	9003-39-8D, Polyvinylpyrrolidone, iodine complexes 14900-04-0, Triiodide			
RL: ANST (Analytical study)				
(electrochem. reference containing, in ion-selective solid-state electrode)				
RN	9003-39-8 HCAPLUS			
CN	2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)			
CM	1			
CRN	88-12-0			
CMF	C6 H9 N O			



RN 14900-04-0 HCAPLUS  
 CN Iodide (I31-) (8CI, 9CI) (CA INDEX NAME)

I- I- I

L36 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:637839 HCAPLUS

DOCUMENT NUMBER: 113:237839

TITLE: Spray-on wound covering compositions containing an antibacterial film-forming reaction product of an organosilicon quaternary ammonium salt and an organic polymer

INVENTOR(S): Stockel, Richard F.

PATENT ASSIGNEE(S): USA

SOURCE: U.S., 5 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4921691	A	19900501	US 1985-768422	19850822
PRIORITY APPLN. INFO.:			US 1985-768422	19850822
OTHER SOURCE(S):	MARPAT 113:237839			

AB A spray-on wound covering composition comprises (a) 2-30 weight% of an antibacterial film-forming compound which is the reaction product of (1) an organosilicon quaternary ammonium salt which includes a hydrolyzable silane group 2-30% and (2) organic polymer reactive with the hydrolyzable group 70-98%; and (b) propellant solvent (balance). 3-(Trimethoxysilyl)propyloctadecyldimethyl ammonium chloride chemical bound to poly(vinyl pyrrolidone) was mixed at 10:90 weight% with Freon 21 and the composition was sprayed onto abraded skin to provide an antimicrobial film dressing which was able to conform to the surface of the skin, was flexible, nontoxic, nontacky, and nonirritating. The film dries rapidly and inhibits water loss from the skin surface while permitting air free of bacteria and dirt from entering the wound.

IC ICM A61L009-04

NCL 424045000

CC 63-6 (Pharmaceuticals)

IT 79-06-1D, 2-Propenamide, polymers, reaction products with organosilicon quaternary ammonium salt **9003-39-8D**, Polyvinylpyrrolidone, derivs., reaction products with organosilicon quaternary ammonium salt **9004-34-6D**, Cellulose, derivs., reaction products with organosilicon quaternary ammonium salt **9004-58-4D**, Ethyl hydroxyethyl cellulose, reaction products with organosilicon quaternary ammonium salt **26022-14-0D**, Polyhydroxyethyl acrylate, reaction products with organosilicon quaternary ammonium salt **27668-52-6D**, reaction products with polymers **95153-62-1D**, reaction products with polymers **105847-52-7D**, reaction products with polymers **106415-29-6D**, reaction products with polymers **106428-42-6D**, reaction products with polymers **129275-92-9D**, reaction products with polymers **129275-94-1D**, reaction products with polymers **129275-95-2D**, reaction products with polymers **129275-97-4D**, reaction products

with polymers 129275-98-5D, reaction products with polyhydroxyalkyl acrylate

RL: BIOL (Biological study)

(wound covering sprays containing)

IT 9003-39-8D, Polyvinylpyrrolidone, derivs., reaction products with organosilicon quaternary ammonium salt 106428-42-6D, reaction products with polymers 129275-94-1D, reaction products with polymers 129275-97-4D, reaction products with polymers

RL: BIOL (Biological study)

(wound covering sprays containing)

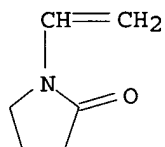
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



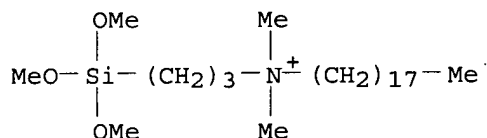
RN 106428-42-6 HCAPLUS

CN 1-Octadecanaminium, N,N-dimethyl-N-[3-(trimethoxysilyl)propyl]-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 92182-06-4

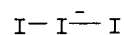
CMF C26 H58 N O3 Si



CM 2

CRN 14900-04-0

CMF I3

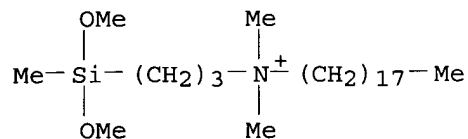


RN 129275-94-1 HCAPLUS

CN 1-Octadecanaminium, N-[3-(dimethoxymethylsilyl)propyl]-N,N-dimethyl-, (triiodide) (9CI) (CA INDEX NAME)

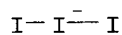
CM 1

CRN 129275-93-0  
CMF C26 H58 N O2 Si



CM 2

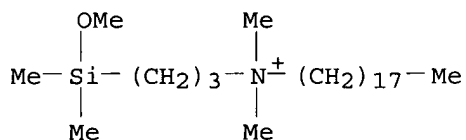
CRN 14900-04-0  
CMF I3



RN 129275-97-4 HCAPLUS  
CN 1-Octadecanaminium, N-[3-(methoxydimethylsilyl)propyl]-N,N-dimethyl-,  
(triiodide) (9CI) (CA INDEX NAME)

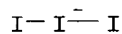
CM 1

CRN 129275-96-3  
CMF C26 H58 N O Si



CM 2

CRN 14900-04-0  
CMF I3



L36 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1987:55975 HCAPLUS  
DOCUMENT NUMBER: 106:55975  
TITLE: Disinfectant solution for contact lens  
INVENTOR(S): Stockel, Richard F.  
PATENT ASSIGNEE(S): USA  
SOURCE: U.S., 9 pp. Cont.-in-part of U.S. Ser. No. 424,197,

abandoned.

CODEN: USXXAM

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4615882	A	19861007	US 1985-729560	19850502
PRIORITY APPLN. INFO.:			US 1982-424197	19820927

AB The reaction products of the organosilicon quaternary NH<sub>4</sub> salts Y<sub>3</sub>-a SiRaQ<sub>m</sub> = N+R<sub>1</sub>R<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>Me X<sup>-</sup> (Y = alkoxy, acyloxy; R = alkyl, Ph; Q = alkylene, phenylene; a = 0-2; m = 1-20; R<sub>1</sub> = C1-18 alkyl, alkaryl, aralkyl; R<sub>2</sub> = lower alkyl; n = 9-17; X = halo, I<sub>3</sub>, acyloxy, Y'SO<sub>4</sub>; R<sub>1</sub> = hydrocarbon radical, H, etc.) with polymers (polyacrylamides, cellulose derivs., polyesters, polyamides, etc.) are disinfectants for contact lenses. The compds. are prepared by hydrolyzing the functional group in the silane to a reactive silanol and subsequent reaction with a reactive H on the polymer. Thus, the reaction product of 3-(trimethoxysilyl)propyldimethyloctadecylamminium chloride with PVA disinfected soft contact lenses. The adduct showed less uptake by the less than conventional quaternary NH<sub>4</sub> disinfectants.

IC ICM A61K031-79  
ICS C11D003-48; C08F008-00; C08B011-20

NCL 424080000

CC 63-8 (Pharmaceuticals)

IT **Bactericides, Disinfectants, and Antiseptics**  
(for contact lenses, reaction products of organosilicon quaternary ammonium salts with polymers as)

IT 9002-89-5, Polyvinyl alcohol 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide **9003-39-8**, Polyvinylpyrrolidone 9004-32-4, Carboxymethylcellulose 25014-12-4, Polymethacrylamide 25087-26-7, Polymethacrylic acid 25897-89-6, Polydiacetoneacrylamide 26101-52-0 50851-57-5, Polystyrenesulfonic acid  
RL: BIOL (Biological study)  
(reaction products with organosilicon quaternary ammonium salts, contact lens disinfectant)

IT 27668-52-6 62117-57-1 95153-62-1 105847-52-7 106415-22-9  
106415-23-0 106415-24-1 106415-25-2 106415-26-3 106415-27-4  
106415-28-5 106415-29-6 106415-30-9 106415-31-0 106415-32-1  
106415-33-2 106428-41-5 **106428-42-6 106428-44-8**  
RL: BIOL (Biological study)  
(reaction products with polymers, contact lens disinfectant)

IT **9003-39-8**, Polyvinylpyrrolidone  
RL: BIOL (Biological study)  
(reaction products with organosilicon quaternary ammonium salts, contact lens disinfectant)

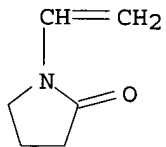
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



IT 106428-42-6 106428-44-8

RL: BIOL (Biological study)

(reaction products with polymers, contact lens disinfectant)

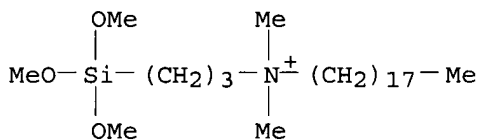
RN 106428-42-6 HCAPLUS

CN 1-Octadecanaminium, N,N-dimethyl-N-[3-(trimethoxysilyl)propyl]-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 92182-06-4

CMF C26 H58 N O3 Si



CM 2

CRN 14900-04-0

CMF I3

I-I-I

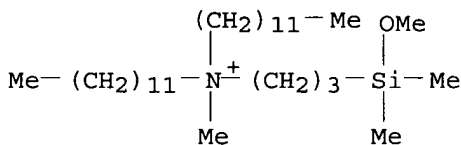
RN 106428-44-8 HCAPLUS

CN 1-Dodecanaminium, N-dodecyl-N-[3-(methoxydimethylsilyl)propyl]-N-methyl-, (triiodide) (9CI) (CA INDEX NAME)

CM 1

CRN 106428-43-7

CMF C31 H68 N O Si



CM 2

CRN 14900-04-0



CMF I3

I-I-I

L36 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1986:578511 HCAPLUS  
 DOCUMENT NUMBER: 105:178511  
 TITLE: Iodine-containing surface active compositions  
 INVENTOR(S): Woodward, Fred E.; Hudson, Alice P.  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S., 11 pp. Cont.-in-part of U.S. Ser. No. 319,075,  
 abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4597975	A	19860701	US 1983-540372	19831011
PRIORITY APPLN. INFO.:				
			US 1975-577274	19750514
			US 1975-577303	19750514
			US 1976-722493	19760913
			US 1977-829520	19770831
			US 1980-160374	19800617
			US 1981-319075	19811106

AB A stable aqueous biocidal solution, useful for cleaning and disinfecting skin and hard surfaces, comprises (1) a protonated amine oxide-triiodide salt,  $R_1NMe_2OH+I_3^-$  ( $R_1 = C_{10-18}$  alkyl); (2) a protonated amine oxide,  $R_1NMe_2OH+X^-$  ( $R_1 = C_{10-18}$  alkyl;  $X = I, Cl, Br$ , phosphate, phosphate ester, lactate, citrate, malate, glycolate, formate, oxalate, tartrate, or sulfate); (3) an amine oxide  $R_1NMe_2O$  ( $R_1 = C_{10-18}$  alkyl); (4) a water-soluble acid  $HY$  ( $Y =$  phosphate, phosphate ester,  $Cl, Br$ , lactate, citrate, malate, glycolate, formate, oxalate, tartrate, or sulfate); and (5) 1 or more substances chosen from the group consisting of surface active phosphate esters, nonionic surfactants, and alcs. An amine oxide iodophor possesses good lather, emolliency, and mildness. Also,  $I$  remains associated with the surfactant at high dilns. so that the stability of  $I$  in the presence of organic matter is improved while the biocidal activity remains high. Thus, an amine oxide iodophor was prepared by mixing myristyldimethylamine oxide in water with  $H_3PO_4$  and then adding  $I_2$ . The iodophore was diluted and its biocidal activity was determined against *Pseudomonas aeruginosa*, *Staphylococcus aureus*, and *S. choleraesuis*.

IC ICM A01N059-12  
 ICS A01N033-24

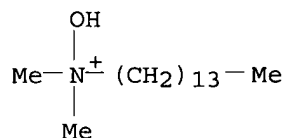
NCL 424150000

CC 63-8 (Pharmaceuticals)  
 Section cross-reference(s): 62

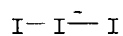
IT **Bactericides, Disinfectants, and Antiseptics**  
 (amine oxide iodophors in)

IT 5725-96-2D,  $C_{12-16}$  alkyl derivs., triiodide salts 5725-96-2D, coco-alkyl derivs., triiodide salts 7553-56-2D, reaction products with amine oxides 104670-11-3 104670-12-4 104670-14-6

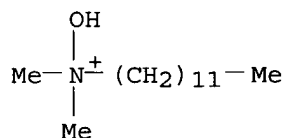
104670-16-8 104778-26-9  
 RL: BIOL (Biological study)  
 (bactericidal cleanser containing)  
 IT 6915-15-7 7647-01-0, biological studies 7664-38-2, biological studies  
 9003-11-6 9003-39-8  
 RL: BIOL (Biological study)  
 (bactericidal cleanser containing amine oxide iodophor and)  
 IT 104670-11-3 104670-12-4 104670-14-6  
 104670-16-8  
 RL: BIOL (Biological study)  
 (bactericidal cleanser containing)  
 RN 104670-11-3 HCAPLUS  
 CN 1-Tetradecanaminium, N-hydroxy-N,N-dimethyl-, (triiodide) (9CI) (CA INDEX  
 NAME)  
 CM 1  
 CRN 104670-10-2  
 CMF C16 H36 N O



CM 2  
 CRN 14900-04-0  
 CMF I3



RN 104670-12-4 HCAPLUS  
 CN 1-Dodecanaminium, N-hydroxy-N,N-dimethyl-, (triiodide) (9CI) (CA INDEX  
 NAME)  
 CM 1  
 CRN 48069-15-4  
 CMF C14 H32 N O



CM 2

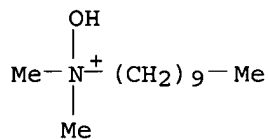
CRN 14900-04-0  
CMF I3

I- I<sup>-</sup> I

RN 104670-14-6 HCAPLUS  
CN 1-Decanaminium, N-hydroxy-N,N-dimethyl-, (triiodide) (9CI) (CA INDEX  
NAME)

CM 1

CRN 104670-13-5  
CMF C12 H28 N O



CM 2

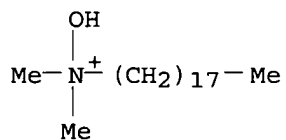
CRN 14900-04-0  
CMF I3

I- I<sup>-</sup> I

RN 104670-16-8 HCAPLUS  
CN 1-Octadecanaminium, N-hydroxy-N,N-dimethyl-, (triiodide) (9CI) (CA INDEX  
NAME)

CM 1

CRN 104670-15-7  
CMF C20 H44 N O



CM 2

CRN 14900-04-0  
CMF I3

I- I- I

IT 9003-39-8

RL: BIOL (Biological study)

(bactericidal cleanser containing amine oxide iodophor and)

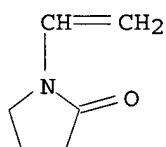
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



L36 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1985:416312 HCAPLUS

DOCUMENT NUMBER: 103:16312

TITLE: Reaction of povidone-iodine with amino acids and other important biological compounds

AUTHOR(S): Alexander, Nicholas M.

CORPORATE SOURCE: Sch. Med., Univ. California, San Diego, CA, 92103, USA

SOURCE: Proc. Int. Symp. Povidone (1983), 274-88. Editor(s): Digenis, George A.; Ansell, Jay. Univ. Ky., Coll. Pharm.: Lexington, Ky.

CODEN: 52WBAM

DOCUMENT TYPE: Conference

LANGUAGE: English

AB Povidone-I2 oxidizes tryptophan [73-22-3], cysteine [52-90-4], methionine [63-68-3], ascorbic acid [50-81-7], tyrosine [60-18-4], 3-monoiodotyrosine [70-78-0], 3,5,3'-triiodothyronine [6893-02-3], histidine [71-00-1], unsatd. fatty acids, and cytosine [71-30-7]. The oxidation reactions occur within 30-60 s; iodination of the aromatic amino acids

is somewhat slower, but faster than iodination of oleic acid [112-80-1], linoleic acid [60-33-3], and cytosine. Glucose, HCO<sub>3</sub><sup>-</sup>, sialic acid, cytidine, and 5'-CMP are not reactive. Thyroxine [51-48-9] and 3,5-diiiodotyrosine [300-39-0] do not react after 5 min but longer incubation periods result in I-exchange with the iodophor. Di- and tripeptides containing reactive amino acids also react with povidone-I2 but at slower rates than with the free amino acids. Tryptophan, methionine, cysteine, and ascorbate are oxidized to tryptophan oxindole [32999-55-6], methionine sulfoxide [454-41-1], cystine [56-89-3], and dehydroascorbic acid [490-83-5], resp., based on the moles of I2 reacting per mol of compound. Tyrosine and 3-monoiodotyrosine are converted to 3,5-diiiodotyrosine, and histidine forms both 2,5-di- [6996-16-3] and 1,2,5-triiodohistidine [94632-77-6] depending on the length of reaction and the molar ratio of available I to amino acid. Cytosine is probably iodinated to 5-iodocytosine [1122-44-7]. A convenient spectrophotometric

method for measuring available I2 in the iodophor was developed, and consisted of completely converting povidone-I2 to povidone-I3- (with excess I-), a stable complex with twice the absorptivity of povidone-I2. The oxidation potentials of povidone-I2, I2, and I3- are very similar, because they cannot oxidize pos. I2 reagents. These results indicate that the topical germicidal action of povidone-I2 may be mediated through the oxidation and iodination of amino acids, SH compds., peptides, proteins, enzymes, vitamin C, lipids, and cytosine, resulting in the inactivation of mols. that are essential for viability.

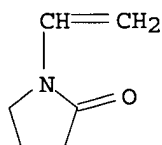
CC 1-2 (Pharmacology)  
 IT 14900-04-0D, polyvinylpyrrolidone complexes  
 RL: PRP (Properties)  
 (UV-visible spectrum of)  
 IT 9003-39-8D, iodine complexes  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with amino acids and other biochem.)  
 IT 14900-04-0D, polyvinylpyrrolidone complexes  
 RL: PRP (Properties)  
 (UV-visible spectrum of)  
 RN 14900-04-0 HCAPLUS  
 CN Iodide (I31-) (8CI, 9CI) (CA INDEX NAME)

I- I<sup>-</sup> I

IT 9003-39-8D, iodine complexes  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with amino acids and other biochem.)  
 RN 9003-39-8 HCAPLUS  
 CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0  
 CMF C6 H9 N O



L36 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1983:576411 HCAPLUS  
 DOCUMENT NUMBER: 99:176411  
 TITLE: Poly(N-vinylamides), complexation and conformational changes in aqueous solution  
 AUTHOR(S): Kirsh, Yu. E.; Soos, T. A.; Karaputadze, T. M.  
 CORPORATE SOURCE: All-Union Sci.-Res. Inst. Technol. Blood Substitutes Horm. Prep., Moscow, 109044, USSR  
 SOURCE: European Polymer Journal (1983), 19(7), 639-45  
 CODEN: EUPJAG; ISSN: 0014-3057  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Complexation of poly(N-vinylamides), e.g. poly(N-vinylcaprolactam), with I2 or 1-anilinonaphthalene-8-sulfonate (I) was studied. Complexation depended on chain length. The stability constant for the polymers and I3- was .apprx.105M. Elastic repulsion between neg. charged SO3- groups of I caused unfolding of polymer coils.

CC 35-8 (Chemistry of Synthetic High Polymers)

IT 82-76-8DP, poly(vinylamide) complexes **9003-39-8DP**, anilinonaphthalenesulfonate and triiodide complexes **14900-04-0DP**, poly(vinylamide) complexes 25189-83-7DP, anilinonaphthalenesulfonate and triiodide complexes **26616-03-5DP**, anilinonaphthalenesulfonate and triiodide complexes **28928-28-1DP**, anilinonaphthalenesulfonate and triiodide complexes 51987-20-3DP, anilinonaphthalenesulfonate and triiodide complexes

RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, conformation effect on)

IT **9003-39-8DP**, anilinonaphthalenesulfonate and triiodide complexes **14900-04-0DP**, poly(vinylamide) complexes **26616-03-5DP**, anilinonaphthalenesulfonate and triiodide complexes **28928-28-1DP**, anilinonaphthalenesulfonate and triiodide complexes

RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, conformation effect on)

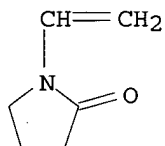
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



RN 14900-04-0 HCAPLUS

CN Iodide (I31-) (8CI, 9CI) (CA INDEX NAME)

I-I-I

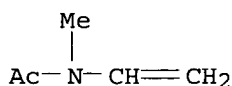
RN 26616-03-5 HCAPLUS

CN Acetamide, N-ethenyl-N-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 3195-78-6

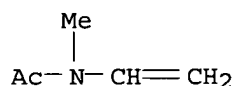
CMF C5 H9 N O



RN 28928-28-1 HCAPLUS  
 CN Acetamide, N-ethenyl-N-methyl-, polymer with 1-ethenylhexahydro-2H-azepin-2-one (9CI) (CA INDEX NAME)

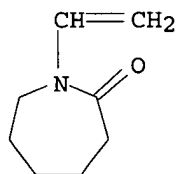
CM 1

CRN 3195-78-6  
 CMF C5 H9 N O



CM 2

CRN 2235-00-9  
 CMF C8 H13 N O



L36 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1983:185668 HCAPLUS

DOCUMENT NUMBER: 98:185668

TITLE: Potentiometric determination of the equilibrium concentrations of free and complex bound iodine in aqueous solutions of poly(vinylpyrrolidone)-iodine (povidone-iodine)

AUTHOR(S): Gottardi, Waldemar

CORPORATE SOURCE: Inst. Hyg., Univ. Innsbruck, Innsbruck, A-6010, Austria

SOURCE: Fresenius' Zeitschrift fuer Analytische Chemie (1983), 314(6), 582-5

CODEN: ZACFAU; ISSN: 0016-1152

DOCUMENT TYPE: Journal

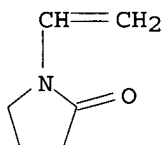
LANGUAGE: German

AB The equilibrium concns. of I2 and I3- in aqueous povidone-iodine [25655-41-8] solns. (0.001-20.0%, pH 4, 25°) were evaluated from the redox potential and the iodide concentration as measured by the iodide electrode (HOI, OI- H2O+I and IO3- can be neglected under the conditions chosen). The values obtained for [I-], [I2], [I3-] and Cox (iodometrically titrable iodine) indicate, that the amount of iodine which is complex bound to the povidone matrix consists of HI3 - and I2 - groups. At concns. >1% it represents nearly the whole oxidation capacity, while it can be neglected below 0.01%. The concentration of the free, mol. iodine (I2) only is 4.5 + 10-6 m/L (1.1 ppm) in the 20% solution and increases to a maximum of .apprx.10-4 m/L (25.4 ppm) in the 0.1% solution The precision of the method is discussed; the overall error of the calculated values was 8-12%.

CC 64-4 (Pharmaceutical Analysis)  
IT **25655-41-8**  
RL: ANST (Analytical study)  
(determination of free and complex bound iodine in solns. of)  
IT 7553-56-2, analysis **14900-04-0** 20461-54-5, analysis  
RL: ANT (Analyte); ANST (Analytical study)  
(determination of, in iodine-poly(vinylpyrrolidone) solns.)  
IT **25655-41-8**  
RL: ANST (Analytical study)  
(determination of free and complex bound iodine in solns. of)  
RN 25655-41-8 HCAPLUS  
CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine (9CI) (CA  
INDEX NAME)  
  
CM 1  
  
CRN 7553-56-2  
CMF I2

I-I

CM 2  
  
CRN 9003-39-8  
CMF (C6 H9 N O)x  
CCI PMS  
  
CM 3  
  
CRN 88-12-0  
CMF C6 H9 N O



IT **14900-04-0**  
RL: ANT (Analyte); ANST (Analytical study)  
(determination of, in iodine-poly(vinylpyrrolidone) solns.)  
RN 14900-04-0 HCAPLUS  
CN Iodide (I31-) (8CI, 9CI) (CA INDEX NAME)

I-I-I

L36 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1982:517321 HCAPLUS  
DOCUMENT NUMBER: 97:117321  
TITLE: Electrochemical photovoltaic cells based on n-gallium



arsenide and the triiodide/iodide redox couple in acetonitrile

AUTHOR(S): Langmuir, M. E.; Parker, M. A.; Rauh, R. D.  
 CORPORATE SOURCE: EIC Lab., Inc., Newton, MA, 02158, USA  
 SOURCE: Journal of the Electrochemical Society (1982), 129(8), 1705-10  
 CODEN: JESOAN; ISSN: 0013-4651

DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The electrochem. photovoltaic cell (EPC) based on n-type GaAs and a MeCN, I<sub>3</sub><sup>-</sup>/I<sup>-</sup> redox electrolyte was evaluated. Greater than 1M I<sup>-</sup> was necessary to avoid concentration polarization at the photoanode above moderate illumination intensities. The charge separation at the illuminated n-GaAs/electrolyte interface was enhanced by adsorption of Se<sup>2-</sup> and Ru<sup>3+</sup> or by complexing polymers such as poly(vinylpyrrolidone). In practical cells, a compromise is necessary between light absorption by I<sub>3</sub><sup>-</sup>, and having sufficient I<sub>3</sub><sup>-</sup> to depolarize the counter electrode. Best solar cell efficiency in the quiescent electrolyte under 53 mW/cm<sup>2</sup> irradiation was about 3.4% with open-circuit photovoltage = 0.60 short-circuit photocurrent = 9 mA/cm<sup>2</sup>, and fill factor 0.34 with no corrections for solution absorbance or cell reflectance.

CC 72-2 (Electrochemistry)  
 Section cross-reference(s): 52, 76

IT 7440-18-8, properties 9003-39-8 22541-48-6 25014-15-7  
 25232-41-1  
 RL: PRP (Properties)  
 (adsorbed, by gallium arsenide electrode, in photovoltaic cell with triiodide-iodide couple in acetonitrile)

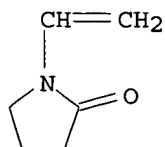
IT 14900-04-0  
 RL: PRP (Properties)  
 (redox system with iodide, in acetonitrile for gallium arsenide photovoltaic cell)

IT 9003-39-8  
 RL: PRP (Properties)  
 (adsorbed, by gallium arsenide electrode, in photovoltaic cell with triiodide-iodide couple in acetonitrile)

RN 9003-39-8 HCAPLUS  
 CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0  
 CMF C6 H9 N O



IT 14900-04-0  
 RL: PRP (Properties)  
 (redox system with iodide, in acetonitrile for gallium arsenide photovoltaic cell)

RN 14900-04-0 HCAPLUS  
 CN Iodide (I<sub>3</sub><sup>-</sup>) (8CI, 9CI) (CA INDEX NAME)

I-I<sup>-</sup>I

L36 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1981:157502 HCAPLUS

DOCUMENT NUMBER: 94:157502

TITLE: Study of the mechanism of complexation in aqueous solutions of poly(N-vinylamides) with iodide (I<sup>-</sup>) ion

AUTHOR(S): Sus, T. A.; Karaputadze, T. M.; Bairamov, Yu. Yu.; Kazarin, L. A.; Kirsh, Yu. E.

CORPORATE SOURCE: Vses. Nauchno-Issled. Inst. Tekhnol. Krovezamen. Gormon. Prep., USSR

SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1981), 23(2), 439-43

CODEN: VYSAAF; ISSN: 0507-5475

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The main factor promoting complex formation between I<sup>-</sup> and vinyl polymers containing an amide side group in aqueous solns. is the participation of H<sub>2</sub>O mols.

in bonding I<sup>-</sup> with the carbonyl of the amide group in a partially dehydrated region around the chain by forming H bonds with units of the polymer chain and with the sorbed small mol. Complex formation was studied for poly(N-methyl-N-vinylacetamide) [26616-03-5], poly(N-vinylpyrrolidone) [9003-39-8], poly(N-vinylcaprolactam) [25189-83-7], and N-vinylcaprolactam-N-vinylpyrrolidone copolymer [51987-20-3] in alc., aqueous alc., and aqueous solns.

CC 35-6 (Synthetic High Polymers)

IT 14900-04-0

RL: USES (Uses)

(complexation of, with amide group-containing vinyl monomers, in aqueous solns., mechanism of)

IT 9003-39-8 25189-83-7 26616-03-5 51987-20-3

RL: USES (Uses)

(iodide complexation with, in aqueous solns., mechanism of)

IT 14900-04-0

RL: USES (Uses)

(complexation of, with amide group-containing vinyl monomers, in aqueous solns., mechanism of)

RN 14900-04-0 HCAPLUS

CN Iodide (I<sup>-</sup>) (8CI, 9CI) (CA INDEX NAME)I-I<sup>-</sup>I

IT 9003-39-8 26616-03-5

RL: USES (Uses)

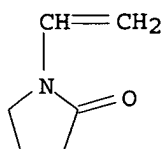
(iodide complexation with, in aqueous solns., mechanism of)

RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

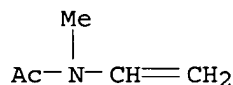
CRN 88-12-0  
CMF C6 H9 N O



RN 26616-03-5 HCAPLUS  
CN Acetamide, N-ethenyl-N-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 3195-78-6  
CMF C5 H9 N O



L36 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1978:51283 HCAPLUS

DOCUMENT NUMBER: 88:51283

TITLE: Effect of poly(vinylpyrrolidone) molecular weight in complexing with iodine and 1-anilinonaphthalene 8-sulfonate in an aqueous solution

AUTHOR(S): Kirsh, Yu. E.; Sus, T. A.; Karaputadze, T. M.

CORPORATE SOURCE: Vses. Nauchno-Issled. Inst. Tekhnol. Krovezamenitelei Gorm. Prep., USSR

SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1977), 19(12), 2774-9

CODEN: VYSAAF; ISSN: 0507-5475

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The capacity of poly(vinylpyrrolidinone) (I) [9003-39-8] of forming complexes with I3- and magnesium 1-anilino-8-naphthalenesulfonate (II) [18108-68-4] in aqueous solns. depended on mol. weight of I in the range (.apprx.1-5) + 103 remained constant at mol. wts. >5 + 103. I of mol. weight ≤103 did not sorb I3- or II.

CC 35-5 (Synthetic High Polymers)

IT 9003-39-8

RL: USES (Uses)

(complex formation of, with anilinonaphthalenesulfonate and triiodide ions, mol. weight effect on)

IT 14900-04-0 18108-68-4

RL: PEP (Physical, engineering or chemical process); PROC (Process) (sorption of, by polyvinylpyrrolidine, mol. weight effect on)

IT 9003-39-8

RL: USES (Uses)

(complex formation of, with anilinonaphthalenesulfonate and triiodide ions, mol. weight effect on)

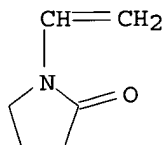
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O

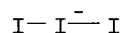


IT 14900-04-0

RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(sorption of, by polyvinylpyrrolidone, mol. weight effect on)

RN 14900-04-0 HCAPLUS

CN Iodide (I31-) (8CI, 9CI) (CA INDEX NAME)



L36 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1967:60485 HCAPLUS

DOCUMENT NUMBER: 66:60485

TITLE: Valence states of iodine in complex compounds with high polymers

AUTHOR(S): Mokhnach, V. O.; Propp, L. N.

SOURCE: Doklady Akademii Nauk SSSR (1966), 170(1), 103-6  
CODEN: DANKAS; ISSN: 0002-3264

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB cf. CA 58, 3499a. Absorption spectra were reported for aqueous solns. of starch-I2-KI (I) with various proportions of added AgNO3, poly(vinylpyrrolidone)-KI-I2 in the presence of AgNO3, and starch-I2-KI during dialysis. At a particular concentration of AgNO3 it was possible to form

AgI from all anions such as I-, I - 3, and IO-, while preserving I2 directly bound to the polymers. Such conditions were recorded spectrometrically and systems with this composition were subjected to prolonged dialysis during which the residual material developed absorption bands at 290 and 350 mμ which were not present in the solution submitted to dialysis and which correspond to I - 3 and IO- ions. Further dialysis resulted in development of absorption bands at 580-590 mμ and finally in disappearance of all these bands. The results indicated that in the iodine complexes studied, the iodine content is extracted as I+ and I-; since under the conditions used the only source of I - 3 and IO- ions can be the "isolated" complexes of I2 with polymers, one can conclude that I2 in these complexes exists in both I+ and I- states.

CC 73 (Spectra and Other Optical Properties)

IT 14900-04-0 15065-65-3 20461-54-5, uses and miscellaneous

RL: PRP (Properties)

(in iodine compds. with starch and 1-vinyl-2-pyrrolidinone polymers, visible spectra and)

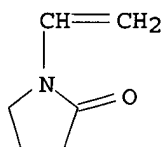
IT 25655-41-8  
RL: PRP (Properties)  
(visible spectrum of, iodine valence states and)  
IT 14900-04-0  
RL: PRP (Properties)  
(in iodine compds. with starch and 1-vinyl-2-pyrrolidinone polymers,  
visible spectra and)  
RN 14900-04-0 HCAPLUS  
CN Iodide (I31-) (8CI, 9CI) (CA INDEX NAME)

I-I<sup>-</sup>-I

IT 25655-41-8  
RL: PRP (Properties)  
(visible spectrum of, iodine valence states and)  
RN 25655-41-8 HCAPLUS  
CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine (9CI) (CA  
INDEX NAME)  
  
CM 1  
  
CRN 7553-56-2  
CMF I2

I-I

CM 2  
  
CRN 9003-39-8  
CMF (C6 H9 N O)x  
CCI PMS  
  
CM 3  
  
CRN 88-12-0  
CMF C6 H9 N O



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L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON ("N-VINYLPYRROLIDONE  
 HOMOPOLYMER"/CN OR "N-VINYLPYRROLIDONE POLYMER"/CN)  
 L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON 1-VINYL-2-PIPERIDINONE/CN  
 L3 1 SEA FILE=REGISTRY ABB=ON PLU=ON N-VINYL-N-METHYLACETAMIDE/CN  
  
 L5 1 SEA FILE=REGISTRY ABB=ON PLU=ON 3195-79-7  
 L11 1 SEA FILE=REGISTRY ABB=ON PLU=ON "PROPANAMIDE, N-ETHENYL-N,2-D  
 IMETHYL-"/CN  
 L26 5 SEA FILE=REGISTRY ABB=ON PLU=ON L1 OR L2 OR L3 OR L5 OR L11  
 L27 596 SEA FILE=REGISTRY ABB=ON PLU=ON (13044-12-7/CRN OR 3195-78-6/  
 CRN OR 3195-79-7/CRN OR 4370-23-4/CRN OR 9003-39-8/CRN)  
 L28 601 SEA FILE=REGISTRY ABB=ON PLU=ON L26 OR L27  
 L29 1 SEA FILE=REGISTRY ABB=ON PLU=ON "TRIIODIDE ION"/CN  
 L30 2714 SEA FILE=REGISTRY ABB=ON PLU=ON 14900-04-0/CRN  
 L31 2715 SEA FILE=REGISTRY ABB=ON PLU=ON L29 OR L30  
 L33 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 AND L31  
 L34 222357 SEA FILE=HCAPLUS ABB=ON PLU=ON ANTIMICROBIAL AGENTS+PFT,NT/CT  
  
 L35 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L33 AND L34  
 L36 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L33 OR L35  
 L39 501840 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYOLEFINS+OLD,NT/CT  
 L46 109984 SEA FILE=HCAPLUS ABB=ON PLU=ON "ANTIBACTERIAL AGENTS"+OLD,NT/  
 CT  
 L47 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 AND (L34 OR L46 OR  
 ANTIMICROB? OR ANTIBACTER? OR BACTERICID?)  
 L50 36 SEA FILE=HCAPLUS ABB=ON PLU=ON L47 NOT L36  
 L52 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L50 AND (L39 OR POLYOLEFIN OR  
 POLYMER? OR POLYETHYLEN?)

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L52 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:772402 HCAPLUS

DOCUMENT NUMBER: 133:351878

TITLE: Bactericidal organic polymeric materials

 INVENTOR(S): Sugo, Takanobu; Takeda, Kazuyoshi; Fujiwara, Kunio;  
 Adachi, Tadashi; Kawazu, Hideo; Komatsu, Makoto;  
 Kanno, Junichi; Takai, Takeshi

 PATENT ASSIGNEE(S): Ebara Corporation, Japan; Japan Atomic Energy Research  
 Institute

SOURCE: PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000064264	A1	20001102	WO 2000-JP2700	20000425
W: JP, US				
RW: DE, FR, GB, IT				
EP 1174029	A1	20020123	EP 2000-917460	20000425

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R: DE, FR, GB, IT

PRIORITY APPLN. INFO.:

JP 1999-119200 A 19990427

WO 2000-JP2700 W 20000425

AB The title materials are filtering materials for sterilization of air or liqs., and composed of organic **polymer** substrates having **polymeric** side chains containing derivs. of N-alkyl-N-vinylalkylamide, and triiodide ions supported on the **polymer** substrates.

IC ICM A01N059-12

ICS A01N025-10; A01N025-34; C08F255-00

CC 47-2 (Apparatus and Plant Equipment)

ST filter **bactericidal** org **polymeric** material

IT Filters

(bactericidal organic **polymeric** materials)

IT 14900-04-0, Triiodide ion

RL: PEP (Physical, engineering or chemical process); PROC (Process)

(in **bactericidal** organic **polymeric** materials)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:173754 HCAPLUS

DOCUMENT NUMBER: 116:173754

TITLE: Preparation of triiodide disinfectant for water

INVENTOR(S): Zhao, Hongjia

PATENT ASSIGNEE(S): Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 5 pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1054248	A	19910904	CN 1990-105038	19900226

PRIORITY APPLN. INFO.: CN 1990-105038 19900226

AB RC6H4CH2N+Me3 I3- (I; R = strongly basic anion-exchanger resin residue), an effective germicide with no toxic side effect, is prepared by contacting RC6H4CH2N+Me3 Cl- with KI3 at 30-60° in continuous cycle. I is insol. in H2O and stable.

IC ICM C07C211-63

ICS C02F001-50; B01D041-04; A01N059-12

CC 25-4 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

Section cross-reference(s): 61

ST **polymer** supported quaternary triiodide germicide; water disinfectant quaternary ammonium triiodide

IT **Bactericides, Disinfectants, and Antiseptics**  
(**polymer**-supported benzyltrimethylammonium triiodide, for water)

IT 12298-68-9, Potassium triiodide

RL: PROC (Process)  
(anion exchange of, with **polymer**-supported benzyltrimethylammonium chloride)

IT 56-93-9D, Benzyltrimethylammonium chloride, **polymer**-supported

RL: PROC (Process)  
(anion exchange of, with potassium triiodide)

IT 7732-18-5, Water, miscellaneous

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RL: MSC (Miscellaneous)  
(disinfectant for, **polymer**-supported benzyltrimethylammonium triiodide as)

IT **140136-03-4DP, polymer**-supported  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as disinfectant for water)

L52 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:85366 HCAPLUS  
DOCUMENT NUMBER: 116:85366  
TITLE: Preparation of iodinated resins as sterilization agents  
INVENTOR(S): Cheng, Huojun; Al, Et  
PATENT ASSIGNEE(S): Beijing Metallurgical Building Construction and Installation Engineering Co., Peop. Rep. China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	CN 1052313	A	19910619	CN 1989-108748	19891128
PRIORITY APPLN. INFO.:				CN 1989-108748	19891128
AB	The title products are prepared by reaction of I3- with quaternary ammonium ion exchangers (A). Mixing A (pH 8.5; pretreated with H2O, EtOH, aqueous NaOH, and aqueous HCl) with 1:1 I2-KI for 2-3 h and washing gave a sterilizing agent.				
IC	ICM C08J007-12 ICS B01J041-08; C02F001-00				
CC	38-3 (Plastics Fabrication and Uses) Section cross-reference(s): 5				
ST	quaternary ammonium <b>polymer</b> iodine complex; sterilization agent <b>polymeric</b>				
IT	<b>Bactericides, Disinfectants, and Antiseptics</b> (iodine complexes with quaternary ammonium <b>polymers</b> , preparation of)				
IT	Quaternary ammonium compounds, compounds RL: USES (Uses) ( <b>polymers</b> , complexes, with triiodide ion, sterilizing agents, manufacture of)				
IT	<b>14900-04-ODP, Iodide (I31-), complexes with quaternary ammonium polymers</b> RL: PREP (Preparation) (sterilizing agents, manufacture of)				

L52 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1991:138020 HCAPLUS  
DOCUMENT NUMBER: 114:138020  
TITLE: Preparation of ionene **polymer** triiodides as microbicides, sanitizers and disinfectants  
INVENTOR(S): Hollis, Cecil George; Rayudu, Sreedhar Rao  
PATENT ASSIGNEE(S): Buckman Laboratories International, Inc., USA  
SOURCE: Eur. Pat. Appl., 13 pp.  
CODEN: EPXXDW

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DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 382562	A1	19900816	EP 1990-301408	19900209
EP 382562	B1	19950920		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL				
US 4960590	A	19901002	US 1989-308677	19890210
ZA 8909353	A	19901031	ZA 1989-9353	19891207
BR 9000486	A	19910115	BR 1990-486	19900131
AU 9048991	A1	19900816	AU 1990-48991	19900201
AU 639433	B2	19930729		
JP 03089992	A2	19910415	JP 1990-29346	19900208
JP 3204962	B2	20010904		
CA 2009697	AA	19900810	CA 1990-2009697	19900209
AT 128004	E	19951015	AT 1990-301408	19900209
ES 2080109	T3	19960201	ES 1990-301408	19900209
US 5093078	A	19920303	US 1990-553591	19900718

PRIORITY APPLN. INFO.: US 1989-308677 A 19890210

AB The title compds. (AN+RR1BN+RR1)n 2nXX1X2 [X,X1,X2 = halo; R, R1 = (un)substituted C2-20 alkyl; A = C1-10 divalent hydrocarbyl, optionally containing O; B = C1-10 divalent hydroxyhydrocarbyl; n = 2-30] are prepared as microbicides. The compds. are useful as sanitizers, for controlling microorganisms in aqueous systems, and for skin disinfection in human and veterinary medicine. Busan 77 (21.6 g) was added to a solution of 12.7 g iodine and 20.0 g KI in 1 L water, to give poly[oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene di(triiodide)] (I). I had a min. inhibitory concentration of 0.3 ppm against Enterobacter aerogenes.

IC ICM A01N033-12

ICS C02F001-50; C08G073-02

CC 5-2 (Agrochemical Bioregulators)

Section cross-reference(s): 38, 63

ST ionene **polymer** iodide prepn microbicide

IT Algicides

**Bactericides, Disinfectants, and Antiseptics**

**Fungicides and Fungistats**

(ionene **polymer** triiodides)

IT Sanitation

(ionene **polymer** triiodides for)

IT Ionene **polymers**

RL: SPN (Synthetic preparation); PREP (Preparation)

(triiodides, preparation of, as microbicides)

IT Waters, potable

(cooling, microbicides for, ionene **polymer** triiodide as)

IT **132743-80-7P 132743-82-9P 132743-84-1P**

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of, as microbicide)

L52 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:218864 HCAPLUS

DOCUMENT NUMBER: 112:218864

TITLE: 1-Methyl-3,5,7-triaza-1-azoniatricyclodecane triiodide

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preparation for control of microorganisms in aqueous systems

INVENTOR(S): Rayudu, S. Rao  
 PATENT ASSIGNEE(S): Buckman Laboratories International, Inc., USA  
 SOURCE: U.S., 4 pp.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4892583	A	19900109	US 1988-268205	19881104
ZA 8904891	A	19900328	ZA 1989-4891	19890628
JP 02138185	A2	19900528	JP 1989-172852	19890704
CA 1315788	A1	19930406	CA 1989-604646	19890704
FI 8904111	A	19900505	FI 1989-4111	19890901
NO 8903925	A	19900507	NO 1989-3925	19891003
NO 174792	B	19940405		
NO 174792	C	19940713		
BR 8905253	A	19900522	BR 1989-5253	19891012
AU 8943568	A1	19900510	AU 1989-43568	19891020
AU 633520	B2	19930204		
US 5023332	A	19910611	US 1989-427364	19891027
EP 367634	A2	19900509	EP 1989-311474	19891106
EP 367634	A3	19900613		
EP 367634	B1	19930825		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 93497	E	19930915	AT 1989-311474	19891106
ES 2045464	T3	19940116	ES 1989-311474	19891106
PRIORITY APPLN. INFO.:			US 1988-268205	19881104
			EP 1989-311474	19891106

AB The title compound (I) (hexamine methiodide) is prepared by stirring the corresponding monochloride with I2 in aqueous KI. An acrylic **polymer** emulsion containing  $\geq 400$  ppm I resisted microorganisms for 3 wk.

IC ICM C09D005-16  
 ICS C07D487-12

NCL 106018320

CC 42-5 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 5, 28

ST methyltriazaazoniatricyclodecane iodide microbicide; acrylic **polymer** emulsion microbicide; waterborne coating microbicide; hexamine methiodide microbicide

IT **Bactericides, Disinfectants, and Antiseptics**  
**Fungicides and Fungistats**  
 (hexamine methiodide, for aqueous compns., manufacture of)

IT **26805-90-3P**  
 RL: PREP (Preparation)  
 (microbicides for aqueous compns., manufacture of)

L52 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:40045 HCAPLUS

DOCUMENT NUMBER: 110:40045

TITLE: Supression of microorganisms on environmentally exposed vinyl surfaces

AUTHOR(S): Costello, M. J.; Janauer, G. E.; Kresge, B.

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CORPORATE SOURCE: Dep. Chem., SUNY, Binghamton, NY, 13901, USA  
 SOURCE: U. S. Environ. Prot. Agency, Res. Dev., [Rep.] EPA  
 (1987), EPA/600/9-87/031, Proc.: Conf. Prog. Chem.  
 Disinfect., 3rd, 1986, 395-411  
 CODEN: XPARD6; ISSN: 0092-8054

DOCUMENT TYPE: Report  
 LANGUAGE: English

AB The surfaces of plasticized vinyl films were disinfected by application of  
 I3- and I5- complexes of styrene **polymer**-based anion exchangers.

CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 63

IT **Bactericides, Disinfectants, and Antiseptics**  
 (polyiodide-anion exchanger complexes, for vinyl film surfaces)

IT Vinyl compounds, **polymers**  
 RL: USES (Uses)  
 (**polymers**, films, disinfectants for, polyiodide-anion  
 exchanger complexes as)

IT **14900-04-0D**, Iodide (I31-), complexes with anion exchangers  
**22318-17-8D**, Iodide (I51-), complexes with anion exchangers  
 RL: USES (Uses)  
 (disinfectants, for vinyl film surfaces)

L52 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1975:595061 HCAPLUS  
 DOCUMENT NUMBER: 83:195061  
 TITLE: Insoluble **polymeric** quaternary trihalogen  
 salt coated substrates

INVENTOR(S): Rembaum, Alan; Landel, Robert F.; Keyzer, Hendrik  
 PATENT ASSIGNEE(S): California Institute of Technology, USA  
 SOURCE: U.S., 8 pp.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3898336	A	19750805	US 1972-252502	19720511
US 3778476	A	19731211	US 1970-36431	19700511

PRIORITY APPLN. INFO.: US 1970-36431 19700511

AB **Polymeric** quaternary ammonium trihalides have  
**bactericidal** properties and can be deposited by precipitation on materials  
 used in prosthesis or surgery. Thus, trans-1,4-dichloro-2-butene-  
 N,N,N',N'-tetramethyl-1,3-diaminopropane copolymer (I) [52193-09-6] was  
 obtained by reacting its monomers at room temperature for 3 days in MeOH  
 solution

I was soluble in water, but the corresponding I3 salt was not. Other  
**polymers** prepared included 1,4-dibromobutane-N,N,N',N'-tetramethyl-  
 1,3-diaminopropane copolymer [29322-33-6] and 1,3-dibromopropane-N,N,N',N'-  
 tetramethyl-1,3-diaminopropane copolymer (II) [29322-34-7]. Dipping Dacon  
 cloth (which is used for arterial prosthetic devices) in aqueous II solution  
 and  
 then in KI-I2 solution precipitated insol. triiodide salt of II which inhibited  
 bacterial growth. Similarly, silk sutures and silica gel could be  
 rendered resistant to bacteria.

IC B44D

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NCL 424025000  
 CC 39-6 (Textiles)  
 Section cross-reference(s): 63  
 ST **bactericidal polymer** cloth impregnation; ammonium  
**polymeric salt bactericidal**; medicinal textile  
**bactericidal polymer**; silica gel **bactericidal**  
**polymer**  
 IT Prosthetic materials and Prosthetics  
 Surgical dressings  
 Surgical threads and wires  
 Silica gel, uses and miscellaneous  
 RL: USES (Uses)  
 (bacteriostatic coatings for, **polymeric** quaternary ammonium  
 trihalides as)  
 IT Urethane **polymers**, uses and miscellaneous  
 RL: USES (Uses)  
 (containing quaternary ammonium trihalide groups, bacteriostatic coatings)  
 IT **Bactericides, Disinfectants and Antiseptics**  
 (**polymeric** quaternary ammonium trihalide coatings, for  
 arterial prosthetics and sutures)  
 IT Coating materials  
 (**polymeric** quaternary ammonium trihalides, bacteriostatic)  
 IT Quaternary ammonium compounds, uses and miscellaneous  
 RL: USES (Uses)  
 (**polymeric** trihalides, bacteriostatic coatings)  
 IT Ionene **polymers**  
 RL: USES (Uses)  
 (trihalides, bacteriostatic coatings)  
 IT **52137-06-1P 52137-08-3P 52231-67-1P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and bacteriostatic properties of)

L52 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1974:416709 HCAPLUS

DOCUMENT NUMBER: 81:16709

TITLE: **Polymeric** organic halogen salts

INVENTOR(S): Rembaum, Alan; Landel, Robert F.; Keyzer, Hendrik

PATENT ASSIGNEE(S): California Institute of Technology

SOURCE: U.S., 6 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3778476	A	19731211	US 1970-36431	19700511
US 3898336	A	19750805	US 1972-252502	19720511

PRIORITY APPLN. INFO.: US 1970-36431 19700511

AB Linear **polymeric** salts  $N+(R1)(R2)R3N+(R1)(R2)R4n$  2X-n were prepared by treating a solution of a suitable linear quaternary ammonium **polymer** salt with a halogen source such as a solution of  $I_2$  and KI or  $Br_2$  and KBr, thus increasing the amount of halogen at each N center, and precipitating the insol. salt from the solution. The salts exhibited **bactericidal** activity, e.g.,  $(Me_2N)_2(CH_2)_3$  and  $trans-ClCH_2CH:CHCH_2Cl$  were mixed in MeOH to give

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[N+Me<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>N+Me<sub>2</sub>CH<sub>2</sub>CH:CHCH<sub>2</sub>]<sub>n</sub> 2Cl-<sub>n</sub>. The salts were formed in some examples in situ on an inorg. support. Bandages may be dipped in a solution of the salt.

IC C07C; C08G

NCL 260567000P

CC 63-6 (Pharmaceuticals)

ST **polymer ammonium halide bactericide**

IT **Bactericides, Disinfectants and Antiseptics**

(ammonium halide **polymers**)

IT 29322-33-6 29322-34-7 **52137-06-1** 52137-07-2

**52137-08-3 52137-09-4** 52193-09-6 **52231-67-1**

53042-08-3

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(**bactericide**)

L52 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1971:489198 HCAPLUS

DOCUMENT NUMBER: 75:89198

TITLE: Ion-exchange resins for disinfecting water

INVENTOR(S): Lambert, Jack L.; Fina, Louis R.

PATENT ASSIGNEE(S): Kansas State University Research Foundation

SOURCE: Ger. Offen., 22 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2059379		19710609		
CA 942188			CA	
FR 2072807			FR	
GB 1331648			GB	
US 3817860		19740000	US	
ZA 7008008		19700000	ZA	

PRIORITY APPLN. INFO.: US 19691203  
US 19701102

AB An ionic addition compound containing triiodide ion and prepared by treatment of the

quaternary ammonium form of an ion exchange resin with KI and I in water kills bacteria and is useful for water purification. The column of resin does not retain the dead bacteria and does not release significant amts. of I to the water during purification.

IC C02B

CC 37 (Plastics Fabrication and Uses)

ST iodine ion exchanger **bactericide**; water purifn ion exchanger

IT Ammonium compounds, substituted, **polymers**

Ion exchangers, biological studies

Sulfonium compounds

RL: USES (Uses)

(iodides (I<sub>3</sub><sup>-</sup>), **bactericides**, in water purification)

IT **Bactericides**

(ion exchange resin triiodides, for water purification)

IT Amberlite IRA 400, iodide (I<sub>3</sub><sup>-</sup>)

Amberlite IRA 400S, iodide (I<sub>3</sub><sup>-</sup>)

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Rexyn 201, (triiodide)

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(bactericides, in water purification)

IT 53148-77-9, Ionac A 540 60476-50-8, Stamex S 44

RL: USES (Uses)

(iodide(I3I-), bactericides, in water purification)

IT 14900-04-0

RL: USES (Uses)

(ion exchange resin salts of, bactericides, in water purification)

L52 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1971:437915 HCAPLUS

DOCUMENT NUMBER: 75:37915

TITLE: 1,2-Dithiole and 1,2-dithiolium compounds

INVENTOR(S): Klingsberg, Erwin

PATENT ASSIGNEE(S): American Cyanamid Co.

SOURCE: U.S., 5 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3575968	A	19710420	US 1968-712384	19680312
PRIORITY APPLN. INFO.:			US 1968-712384	19680312

AB Dithiolium salts (I, R = H or Ph) are prepared by methylating 3-[ $\alpha$ -(thioformyl)benzylidene]-5-phenyl-1,2-dithioles, and are treated with R<sub>2</sub>NH<sub>2</sub> in AcOH to give the salts (II, R<sub>1</sub> = H), which are converted to the free base imines (III) by treatment with base, or treated with secondary amines to give aminovinyl compds. (II, R<sub>1</sub> = R<sub>2</sub> = H). III can also be prepared from 3-( $\alpha$ -formylbenzylidene)-5-phenyl-1,2-dithioles and primary amines in AcOH. Alkylthiovinyl isothiazolium salts (IV) are obtained from III by direct alkylation, e.g. with MeI. III and IV (R = H, R<sub>1</sub> = Ph) (V) were used to dye polyester, nylon, acetate, or polypropylene fibers, and V had herbicidal activity. For example 3,5-epidithio-2,5-diphenyl-2,4-pentadienal was treated with PhNH<sub>2</sub> and HOAc, giving 3,5-epidithio-2,5-diphenyl-2,5-pentadienylideneaniline (III, R = H, R<sub>2</sub> = Ph). Treatment of 5-phenyl-3-[ $\alpha$ -(thioformyl)benzylidene]-1,2-dithiole with MeI in MeNO<sub>2</sub> gave 3-[2-(methylthio)-1-phenylvinyl]-5-phenyl-1,2-dithiolium iodide (I, R = H). I (R = H) was treated with PhNHMe in MeOH, giving 3-[2-(N-methylanilino)-1-phenylvinyl]-5-phenyl-1,2-dithiolium iodide (II, R = H, R<sub>1</sub> = Me, R<sub>2</sub> = Ph). Treatment of III (R = H, R<sub>2</sub> = Ph) with MeI in MeNO<sub>2</sub> gave V.

IC C07D; C09B

NCL 260240000

CC 40 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

ST dithiols prepn; dithiolium compds prepn; dye dithioles; polyester fiber dye; herbicide isothiazolium compd; nylon fiber dye; acetate fiber dye; bactericide isothiazolium compd; polypropylene fiber dye; thiothiophenes prepn; isothiazolium compd

IT Fiber, acetate, uses and miscellaneous  
Fiber, acrylic, uses and miscellaneous

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Fiber, polyester, uses and miscellaneous

Fiber, propene **polymer**

Nylon, uses and miscellaneous

RL: USES (Uses)

(dyes for, dithiole derivs. as)

IT	20365-46-2P	29021-60-1P	29021-61-2P	31680-78-1P	31680-79-2P
	31680-80-5P	32783-34-9P	32783-35-0P	32783-36-1P	32783-38-3P
	32783-39-4P	32783-41-8P	32783-42-9P	32783-43-0P	32783-44-1P
	32783-46-3P	32783-47-4P	<b>32783-49-6P</b>	32783-50-9P	
	32783-51-0P	32783-52-1P	<b>32783-53-2P</b>	32969-59-8P	
	34741-70-3P				

RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)

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